LEPIDOPTERA: Notodontidae 1940 347

SB608
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no. 42

Number 42

Tree Pest Leaflets

THE SADDLED PROMINENT

(*Heterocampa guttivitta* (Walk.))

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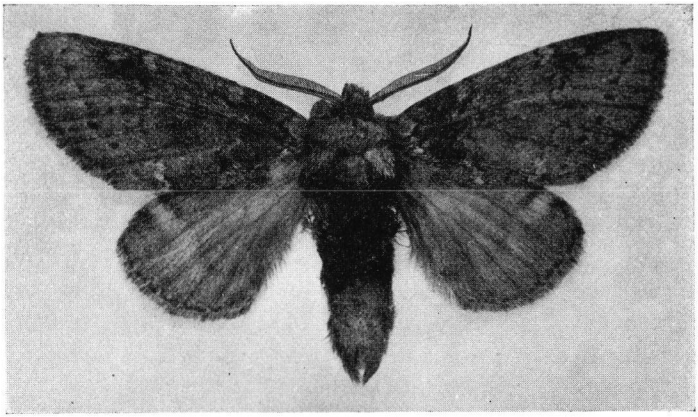

Figure 1. Male adult of saddled prominent, twice natural size. (After Britton)

Issued jointly through the cooperation of the following agencies:

The State Foresters, State Departments of Agriculture, State Agricultural Experiment Stations, Extension Services, Forest Schools, and Forest and Park Associations of New England and New York, and the Northeastern Forest Experiment Station of the Forest Service, the Division of Forest Pathology of the Bureau of Plant Industry, and the Division of Forest Insect Investigations of the Bureau of Entomology and Plant Quarantine, United States Department of Agriculture.

Edited by a Committee of the SOCIETY OF AMERICAN FORESTERS, NEW ENGLAND SECTION, and published for the cooperators by the Massachusetts Forest and Park Association, 3 Joy Street, Boston.

July 1940

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(*Heterocampa guttivitta* (Walk.))

History and Distribution. The saddled prominent is a species of moth apparently native to North America and ranging through the United States and southern Canada east of the Rocky Mountains. Serious outbreaks of this insect occurred on beech and sugar maple in New England from 1907 to 1909, from 1916 to 1920, and in 1930 and 1931.

Host Trees. Beech and sugar maple are preferred food plants, but birch, oak, and other hardwoods are also attacked when interspersed in an infested stand of the favored species. Apple trees are also frequently attacked when growing close to severely infested woodlands.

Damage. Heavily wooded deciduous forests are usually attacked, rather than isolated shade or ornamental trees. Feeding injury observed late in June or during July in the tops of beeches or maples may be suspected as that of the saddled prominent, as the moths tend to lay their eggs on the foliage in the upper branches. Such defoliation on hillsides or mountains may often be seen from a considerable distance during outbreaks. There is a lack of evidence to prove this insect responsible for the killing of large stands of beech or maple, but it is known that a varying degree of mortality in the tree branches results from a severe outbreak. The injury is intensified when defoliation is accompanied by drought. Records indicate that an appreciably reduced sap production is suffered in sugar maple orchards in a year immediately following a severe defoliation.

Descriptions. The moths (fig. 1) have a wing expanse of about 1¾ inches. In the female the inner half of the fore wing is pale olive-brown, the outer half still paler and sometimes whitish. The hind wing is pale gray and the body pale olive-brown. The male is darker than the female with wings and body of an almost even grayish-brown.

The egg is small, circular, and pale green.

Full-grown larvae (fig. 2) are smooth-skinned and about 1½ inches in length. They range in color from bluish-green, the commonest form, to yellow, brown, lavender, or purple, and usually have patterns of variable design and color on their backs, the most conspicuous of which, situated about midway along the body, is said to resemble a saddle; hence the name "Saddled Prominent."

The pupa is about ¾ inch in length and deep reddish-brown.

Life History and Habits. The moths issue late in May or early in June. The insect has the capacity for rapid and widespread dispersion owing to the ability of the female to fly well and lay a large number of eggs. The

eggs, which are laid singly on the leaves, hatch in from 8 to 10 days, the young larvae appearing during the first half of June. The larvae molt four times, becoming full-grown during the latter half of July or the first half of August. They then crawl down the trunk or drop to the ground and fashion silk-lined pupal cells in the lower moist layers of leaf mold or in the upper layer of soil, in which they pupate and spend the winter. A partial second generation occurs occasionally, but it is of little importance economically.

Natural Control. The natural-control factors responsible for keeping the population of the saddled prominent at a minimum during the greater part of the time are insect parasites and predators, birds, and rodents.

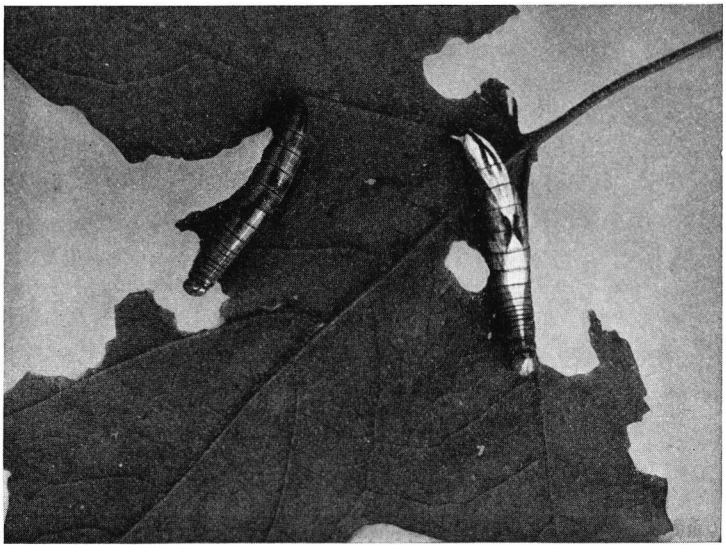

Figure 2. Larvae of the saddled prominent, natural size. (After Britton.)

Despite the effect of these factors, an outbreak sometimes develops which if permitted to run a natural course might increase in intensity over a period of 2 or 3 years and be brought to an end only by starvation and disease. In such an outbreak period artificial means of control are necessary to prevent injury to the trees.

Artificial Control. Artificial control should be employed in outbreak years to protect valuable beech groves, sugar maple orchards, and apple orchards adjoining infested areas. It is best attained by the application of a poison spray to the foliage of infested trees about the middle of June. This may be applied from the ground or from the air. If applied from the ground, a suitable spray mixture consists of 4 pounds of lead arsenate to 100 gallons of water to which fish oil or linseed oil is added as a sticker at the rate of 4 fluid ounces for each pound of lead arsenate used. To effect

proper coverage in tall growth, this mixture should be applied by a high-powered sprayer. In recent years woodland spraying from the air by autogiro has been investigated and found to be of advantage in making possible the spraying of large forest areas previously inaccessible or difficult of treatment by spraying from the ground. The following concentrated spray has been effective in controlling cankerworms when applied by autogiro, and would be suitable for the saddled prominent: 200 pounds of lead arsenate, 10 gallons of fish oil, and 1½ gallons of paraffin oil to 70 gallons of water.

To be of maximum value, spraying of either type should be done at the beginning of a threatened outbreak to prevent further development. Unfortunately an incipient outbreak is frequently inconspicuous and may not be recognized as such until after a large part of the larval population has completed feeding, making spraying impracticable that year. In such a case spraying should be planned for the middle of the next June. Such a beginning of an outbreak may be evidenced by a sudden increase in the numbers of the insect, resulting in defoliation during July of from 10 to 25 percent in a general area after a period of years during which the insect has been relatively inconspicuous.

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